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DIAGNOSES OF NEW SHELLS FROM THE PACIFIC OCEAN

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BY

WILLIAM HEALEY DALL

Curator, Division of Mollusks, United States National Museum

No. 2002.—From the Proceedings of the United States National Museum,
Vol. 45, pages 587-597

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DIAGNOSES OF NEW SHELLS FROM THE PACIFIC OCEAN.

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For several years new species of shells from Northwest America and other parts of the Pacific Ocean have been accumulating in the national collection, and, as some of them have been furnished with manuscript names for the convenience of collectors, it was thought best to prepare diagnoses of some of these species before the manuscript names found their way into print.

Some of the specimens have long been in the collection, but remained unstudied on account of the pressure of other duties; some have been contributed by generous correspondents, and others obtained from various sources. Figures of many of them have been prepared and will appear later.

CHRYSDOMUS EULIMATUS DALL.

Chrysodomus eulimatus DALL, Smiths. Misc. Coll., vol. 50, No. 1727, p. 156, July, 1907.

Shell large, with a thin dehiscent periostracum, and about eight whorls without the (lost) nucleus; shell substance white with the outer layer more or less tinged with rosaceous purple; whorls well inflated, the suture appressed, with a band of minor sculpture in front of it; upper whorls with eight or less rounded prominent flexuous ribs extending from suture to suture, most prominent at the shoulder of the whorl and least so on the presutural band; they become obsolete on the first half of the last whorl; spiral sculpture of three sizes of spiral threads, the larger, of which there are eight between the sutures at the beginning of the last whorl; the second size running in the middle of the wide interspaces between the major cords; and lastly the finer ones which cover the surface of the presutural band and the interspaces between the other threads. All these are crossed by fine rather prominent incremental lines. Aperture elongate-ovate with a wide somewhat recurved canal; body with a thin layer of callus; pillar with a thick white callous border; siphonal fasciole well marked; outer lip thin, simple, sharp,

crenulate by the external sculpture; throat white, smooth; height of shell 168; of last whorl 134; of aperture and canal 105; maximum diameter 78 mm. Operculum large, dark brown, normal to the genus.

Dredged at Aniwa Bay, Sakhalin Island, at station 5009, in 25 fathoms, mud, bottom temperature $38^{\circ} 5$ F. 38.5° . U. S. Bureau of Fisheries steamer *Albatross*. Cat. No. 205371 U.S.N.M.

Only a single adult specimen of this fine species was obtained. It is one of the largest of the genus. Originally described from a very young specimen, it was thought best to give a new diagnosis from the adult.

TRITONOFUSUS JORDANI, new species.

Shell of moderate size, of about seven and a half whorls, the nucleus rounded, not swollen but rather large; suture distinct, the whorls moderately rounded; surface covered with a dark orange-brown periostracum, beneath which the shell substance is white; sculpture of incremental lines, not prominent but regular and close set, crossed by numerous flat spirals with very narrow interspaces, this sculpture covering the whole surface, the spirals being slightly narrower in front of the suture; on the periphery of the last whorl there are about two spirals with their interspace in the width of one millimeter; aperture less than half the length of the shell; canal wide, short, sharply recurved; outer lip simple, flexuous, expanded, receding behind the periphery and advancing near the suture, connected over the body with the pillar by a thin layer of white callus; pillar short, attenuated in front; throat smooth, bluish white; operculum ovate, with apical nucleus, dark brown. Height of shell 43; of last whorl 31; of aperture 20; maximum diameter of shell 21 mm.

Puget Sound, Sucia Island, and Gulf of Georgia in 67 fathoms, sand, bottom temperature $48^{\circ} 5$ F. Also in Bering Sea off the south-east coast of Kamchatka in 96 to 100 fathoms, sand, temperature 31° F. to $33^{\circ} 1$ F. Cat. No. 22642, U.S.N.M.

The specimens are quite uniform, and nearly all have a ferruginous incrustation on the early whorls. The young have a lighter colored, more or less olivaceous periostracum. The suture is not closely appressed and gives the aspect of being minutely channeled, especially on the last whorl.

It is named after Dr. David Starr Jordan, of Stanford University.

BOREOTROPHON GORGON, new species.

Shell elongate, white, of seven whorls, the nucleus small, smooth, rounded, of two whorls; subsequent whorls with a peripheral spinose carina or cord, with two additional cords on the base of the last whorl; last whorl with six, preceding whorl with eight or nine sharp-edged varices, which become prominently spinose where they intersect the cords; interspaces smooth except for incremental lines; aperture ovate, with a raised margin except at the canal; throat white, smooth; operculum muricoid, canal long, slightly

recurved. Height of shell 38; of last whorl 30; of aperture 13; maximum diameter, exclusive of the spines, 18 mm.

Dredged off Hondo, Japan, at station 3698, in 153 fathoms, mud, bottom temperature 65° F. Cat. No. 110771, U.S.N.M.

This elegant species has somewhat the aspect of a *Muricidea* except for its long canal, and it is possible that it should be referred to some section of *Murex* rather than to *Boreotrophon* to which it seems also closely allied.

Genus AMPHISSA H. and A. Adams.

COSMIOCONCHA, new subgenus.

Buccinum sp., Powys, 1835.

Truncaria sp., H. and A. ADAMS, 1853.

Columbella sp., CARPENTER, 1856.

Type.—*Buccinum modestum* Powys, Proc. Zool. Soc. London, 1835, p. 94. Bay of Montijo, Central America.

The type of *Amphissa* is *Buccinum corrugatum* Reeve. The genus is typically represented by a group of species peculiar to the Northwest coast of America, and which does not extend into the Tropics. They are, in short, Columbelloids with a Buccinoid shell, with strong axial, crossed by more or less marked spiral, sculpture.

The group now segregated is tropical, with its focus in the Gulf of California, and with a Columbelloid operculum and radula has a shell practically without axial sculpture and with strong spiral striation, especially on the region near the canal, and sometimes with a single groove directly in front of the suture. There is a marked thickening behind the outer lip, which is sharp and simple, the typical species has lirations inside the aperture on the outer wall of the throat, but some of the others seems to be devoid of this feature. The anterior end of the columella is markedly attenuated; the colors are usually brown and yellow. There is some superficial resemblance to the typical *Truncaria*, which, however, has a very different, narrowly ovate, operculum with the nucleus apical, as in many species of *Turris*.

AMPHISSA (COSMIOCONCHA) PALMERI, new species.

Shell smaller than *A. modesta* Powys, and of a uniform pale brownish color when fresh, with a loosely coiled, smooth, glassy nucleus of two whorls and two subsequent nepionic whorls which show obscure traces of axial ribbing; subsequent whorls about five, smooth except for a faint impressed line in front of the suture, six or seven strong cords on the base of the shell behind the siphonal fasciole, and more or less striation on the fasciole, beside incremental lines; whorls moderately rounded, suture very distinct, not appressed; a strong rounded varix behind the outer lip; aperture elongate, oval, a small callus on the body, but no subsutural sinus; outer lip sharp, simple,

internally with nine or ten short liræ, the series not extending to the extremes of the lip; canal short, deep, rather markedly recurved. Height of shell 19; of last whorl 13; of aperture 10; maximum diameter 9 mm. The same dimensions in *A. modesta* average respectively 24, 17, 13, and 10 mm.

Head of the Gulf of California, Dr. E. Palmer, Cat. No. 182587, U.S.N.M., also at station 3034, in 24 fathoms off Point Fermin in the Gulf, by the U. S. Bureau of Fisheries steamer *Albatross*.

AMPHISSA (COSMIOCONCHA) PERGRACILIS, new species.

Shell elongate, slender, whitish, with brownish flammules, part of which are grouped in an obscure band in front of the suture; nucleus lost; subsequent whorls about eight, moderately convex, with no line in front of the rather deep suture; spiral sculpture on the canal and base of about 20 channeled grooves with wider flattish interspaces; aperture elongate, the inner lip, as far as the end of the canal with a rather thick layer of white callus; outer lip sharp with a feeble varix behind it and with about 15 fine lirations internally; canal short, wide, slightly recurved. Height of shell 24; of last whorl 15; of aperture 10; maximum diameter 7 mm.

Dredged at station 3017 on the west coast of Mexico, in 58 fathoms, green mud, off Cape Lobos. Cat. No. 211030, U.S.N.M.

This is much more slender than the preceding species.

AMPHISSA (COSMIOCONCHA) PARVULA, new species.

Shell small, pale olivaceous, slender, of about 7 moderately convex whorls; suture distinct, minutely channeled, without any depressed line in front of it; sculpture of incremental lines and on the base and canal about 25 channeled grooves with flattish, wider interspaces; the grooves grow fainter and narrower and the interspaces wider, till the sculpture becomes obsolete near the periphery of the whorl; aperture long and narrow, body with a light wash of callus; outer lip sharp, simple, with a narrow but well-marked varix behind it, internally with about 20 fine, sharp, short lirations which extend practically the whole length of the aperture; canal wide, deep, slightly recurved. Height of shell 15; of last whorl 10; of aperture 6.5; maximum diameter 5 mm.

Dredged at station 2996, off La Paz Bay, Gulf of California, by the U. S. Bureau of Fisheries steamer *Albatross* in 112 fathoms, green mud. Cat. No. 211029, U.S.N.M.

At first sight this looks like a miniature *A. pergracilis*, but on closer scrutiny it is seen to have differential characters other than those of size.

LIOTIA LURIDA, new species.

Shell small, dull red or purplish brown, more or less articulated on the ridges, of about four and a half whorls; nucleus minute, flattish;

last whorl with four strong, beaded, spiral cords with subequal interspaces, peripherally; between them and the suture, three slightly smaller similar cords, the space at the suture giving a channeled effect; on the base two less prominent cords and two wider nodulous ridges around the deep, rather narrow umbilicus; aperture circular, the outer lip thick, fringed by the ends of the spiral cords; axial sculpture of numerous fine radial threads, most obvious in the channels between the cords; height of shell, 4.5; maximum diameter of base, 5.5 mm.

Beach, San Josef Island, Gulf of California, Cat. No. 264972, U.S.N.M.

Operculum multispiral, calcareous externally with a small central pit.

BOLMA BARTSCHII, new species.

Shell thin, trochoid, yellowish white with rose-colored flammules and nebulosities, with more or less articulation on the spiral ridges. Nucleus very minute, glassy; nepionic shell white, depressed above, of three rather rounded whorls with numerous low radial plications or riblets; subsequent whorls four, with a sparsely imbricate keel at the periphery and a prominent, beaded, spiral cord one-third of the way from the appressed posterior suture toward the periphery. This arrangement gives a channeled or turriculate aspect to the shell in the sutural region. The last whorl has a third keel, imbricate like the peripheral one but less prominent, bordering the base; the space between the beaded cord and the peripheral keel is on the upper whorls finely spirally striated, but on the last whorl, first two, and then a third, small spiral equidistant threads, articulated white and dark rose color, are developed; the imbrications on the two keels are short, distant, subspinose, and channeled in front; the base is nearly smooth, with fine spiral striation and a widespread, transparent, thin layer of enamel in front of the aperture; pillar smooth, arcuate, pearly; outer lip thin, sharp, markedly expanded; throat pearly; aperture quite oblique; operculum white, smooth, constructed like that of *B. rugosa*, but with the external depression much less marked; altitude of shell 30, maximum diameter 35, diameter of operculum 15 mm.

Dredged in 205 fathoms, sand, off Dowarra Island, near Ternate, Moluccas. Cat. No. 214444, U.S.N.M.

The shell was so tightly closed by the operculum that the animal had decayed, though put in spirits, but the radula was preserved and showed a central tooth of squarish form without cusps, on a larger base, with four laterals on each side; their cusps denticulate with a prominent spur below, behind the cusp, and the usual large mass of uncini. From what was left of it, the sides of the foot seemed destitute of any epipodial appendages.

This very lovely shell is so thin and delicate that it was a surprise to find it possessing a heavy calcareous operculum.

It is named after Dr. Paul Bartsch.

MARGARITES SIMBLUS, new species.

Shell pale gray, beehive-shaped, with a blunt apex and five and a half rapidly enlarging convex whorls; nucleus minute; subsequent whorls polished, finely spirally striate, crossed by very fine flexuous striae corresponding to the lines of growth, which more or less microscopically crenulate the interspaces between the spirals; suture not impressed; base with an obscure angulation peripherally, the sculpture similar to the rest of the shell but more pronounced; umbilicus narrow, deep; aperture subquadrate, oblique; the pillar thin, white; the throat pearly. Height of shell, 13; of last whorl, 10; maximum diameter of base, 14 mm.

Dredged in deep water, off Santa Barbara Channel, California. Cat. No. 267172, U.S.N.M. The specimen did not contain the animal or operculum.

CALLIOSTOMA NEPHELOIDE, new species.

Shell acute-conical, trochiform, of about nine whorls, yellowish, with radiating dark-purple nebulosities and flammules; nucleus more or less inverted, white, glassy, minute; a nepionic whorl and a half follows, with three spiral, latterly beaded cords; the remaining sculpture comprises a strong prominently beaded cord at the periphery immediately in front of which the suture is laid; on the last whorl, between the periphery and the suture behind it, are about a dozen threads smaller than that at the periphery but equally and uniformly beaded, with subequal, smooth interspaces, and mostly alternating in size; there is no obvious axial sculpture; base bordered by a cord (without beading) of the middle size, between which and the center of the base are 18 to 20 flattish straplike spirals, faintly irregularly undulated and with subequal or narrower interspaces, except the three or four nearest the columella which are larger, more distant, and with more or less obscure nodulation; base only slightly convex; pillar arcuate, white, with an obscure ridge around the imperforate umbilical region, ending at the anterior end of the pillar in a nodulous swelling. Aperture broken, but evidently subquadrate with thin, simple, outer lip. Height of shell, 25; of last whorl, 15; maximum diameter of base, 22 mm.

Station 2804, Panama Bay, in 47 fathoms, muddy bottom, Cat. No. 96637, U.S.N.M.

This species is represented only by one broken specimen, but when perfect must be one of the most elegant of the West American species of this elegant group, and quite distinct from any of the others.

PECTEN (PSEUDAMUSIUM) ARCES, new species.

Shell hyaline white, with no anterior ear, subcircular, slightly convex; hinge line rather long, ligament and pit very small, entire surface of convex valve sculptured with subequal radial threads and similar

concentric threads, forming nearly square equal reticulations, about four to a square millimeter; the intersections are slightly prominent on the disk and more or less minutely spinose on the ends of the valve; beside these the entire valve is sculptured with minute equal radial lines, about six to a reticulation; the interior of the valve is glassy, the sculpture showing through. The flatter valve has similar sculpture, with a narrow smooth submargin, a ctenolium of five or six free teeth, a moderately deep byssal notch and five imbricated rays on the ear above the fasciole of the notch.

Height, 35; length, 34.5; diameter, 6.0 mm.

Off Santa Barbara, California, in over 500 fathoms, muddy bottom. Cat. No. 267169, U.S.N.M.

A neat species, remarkable for the even character of its reticulation and its uniformity over both valves.

CUSPIDARIA SUBGLACIALIS, new species.

Shell large for the genus, chalky, with a coarse dehiscent olivaceous periostracum; equivalve, nearly equilateral. Beaks nearly in the center of the shell, anterior dorsal margin arcuately descending, anterior end of shell ovately rounded; posterior slope straight, or slightly distally recurved, with a short compressed distally gaping rostrum, terminally subtruncate; base arcuate, somewhat patulous below and behind the beaks, incurved at the beginning of the rostrum; hinge in the left valve with a small obliquely backwardly directed chondrophore; in the right valve there is also a strong lamina parallel with the dorsal margin and separated from it by a groove which receives the edge of the opposite valve in closing; beaks opisthocelous, inconspicuous. Height, 24; length, 39; diameter, 20 mm.

Off the Californian coast in deep water. Cat. No. 265904, U.S.N.M. Nearest to *C. glacialis* M. Sars, from which it differs in the less prominent and less posterior beaks and less recurved rostrum.

PSEPHIDIA CYMATA, new species.

Shell small, white, solid, rounded triangular, with inconspicuous, somewhat anterior beaks, the lunule and escutcheon very feebly indicated; surface with fine concentric but not perfectly regular low threadlike sculpture; periostracum yellowish, rather coarse; hinge of the genus; inner margins smooth, interior disk polished, the pallial sinus small, ascending, the inner extreme bluntly rounded; muscular impressions distinct, ligament small and weak. Height 5.5; length 6.0; diameter 2.5 mm.

Near Cerros Island, Lower California, in shallow water. Cat. No. 266158, U.S.N.M.

This has nearly the profile of *P. lordi* Baird, but is much less inflated, and the surface is concentrically sculptured instead of smooth.

HALICARDISSA, new genus.

Shell recalling *Halicardia* and *Verticordia*, finely granulose externally, with a few strong radial ribs; the distinctive characters are anatomical. The shell has been figured.¹

The soft parts recall those of *Halicardia* but instead of having a thin netlike gill attached on each side to a more or less convoluted fleshy siphonal septum, thus completing the separation of the pedal and siphonal chambers, the septum is thin and incomplete behind, so that it does not cut off the siphonal from the pedal chamber completely, and the gills form no part of it but are free, except at the proximal end, and appear to have both direct and reflexed laminae; the foot is more like the usual pelecypod foot, with no developed opisthopodium, and the palps offer nothing exceptional. The soft parts, in brief, are intermediate between those of *Verticordia* proper and the ordinary pelecypod, anatomically, and much nearer the former than to the typical *Halicardia*.

Type.—*Verticordia perplicata* Dall, from 812 fathoms near the Galapagos Islands. Cat. No. 266804, U.S.N.M.

Shells of the genus *Halicardia* were referred to *Mytilimeria* by Verrill and Locard, and the present species would from the shell alone be suspected to belong to *Halicardia*.

LYONSIA (ALLOGRAMMA) AMABILIS, new species.

Shell thin, with a pale olivaceous periostracum and pearly interior, the lithodesma small. The sculpture resembles closely that of the type of the group, *L. (A.) formosa* Jeffreys, from the Canaries, but differs in the following details; the anterior transverse ripples, the central nodulous ray, and the radial ridge below the posterior dorsal area are more vertically directed; on the latter area there is only faint indication of the radial ribbing which in *L. formosa* is distinct and minutely spinose; the anterior end is longer than the posterior, while in *formosa* the reverse is the case; the coloration of the periostracum is olivaceous green while in *formosa* it is ferruginous brown. Length 23; of anterior end 12; height 15; diameter 12 mm.

Santa Barbara Channel, California, in deep water. Cat. No. 267161, U.S.N.M

This is a much larger shell than the Atlantic species of the same group.

LYONSIA (ALLOGRAMMA) OAHUËNSIS, new species.

Shell resembling the preceding, but somewhat smaller, pale brown, with the anterior transverse ripples fewer and less vertical than in either of the other species, the median ray less distinct and wider, composed of feeble undulations; the posterior dorsal area with low transverse instead of radial sculpture over its lower half; the posterior

¹ Proc. U. S. Nat. Mus., vol. 12, 1889, pl. 8, fig. 1.

end more attenuated, and the beaks almost exactly central. Length 21.75; of anterior end 10.75; height 13.0; diameter 10.0 mm.

South coast of Oahu Island, Hawaiian Islands, in 310 fathoms, sand, bottom temperature 43.5° F. Cat. No. 252329, U.S.N.M.

LYONSIA PUGETENSIS, new species.

Shell large, thin, pearly under a thin olivaceous gray periostracum which is covered with fine radial lines to which fine sand adheres strongly, so that an attempt to remove the sand also destroys the greater part of the periostracum; the shell is slightly inequivalve and very inequilateral, the anterior end being much shorter; the periostracum projects over the shelly margin; the anterior end is evenly rounded, the posterior rostrate, the beaks not conspicuous; the base is convexly arcuate in the middle but is rapidly attenuated toward the rostrum, which is terminally truncated; interior pearly, pallial area relatively small within the somewhat irregular unsinuated pallial line; hinge edentulous with a small narrow lithodesma. Length of shell 36; of anterior portion 15; height at beaks 17; maximum diameter 10 mm.

Another specimen is 50 mm. long and 22 mm. high, while a third is 52 mm. long and 28 mm. high.

The type, Cat. No. 249966, U.S.N.M., is from the coast of Washington (H. Hannibal); another is from Chignik Bay, Alaska, in 16 fathoms, sand (Dall); and a third from Puget Sound (Kincaid).

This is the largest *Lyonsia* of the coast, if we except *Entodesma* (*Agriodesma*) *saxicola* Baird. The smaller specimen was taken as type because of the better condition of the surface, the periostracum in adults being largely dehiscent.

LYONSIELLA MAGNIFICA, new species.

Soft parts; siphonal orifices not produced, both profusely papillose and separated externally by a bare space; incurrent siphon with a strongly marked circular valve internally. Gills flat, fleshy, with two laminæ completely soldered to the fleshy siphonal septum and with that completely separating the pedal and siphonal chambers; there are no perforations in the septum and no free portions of the gills; foot cylindrical, grooved behind, with a long and profuse byssus of numerous threads; mantle closed except for the narrow byssal foramen and the siphonal orifices; palps short, soldered to the mantle except behind in front of the foot; mantle margins smooth. The excurrent siphon has a small short valve projecting from its orifice, which when contracted is bilabiate, the fold vertical. The general anatomy recalls that of *Lyonsiella abyssicola*, in which, however, Pelseneer indicates an excurrent siphonal tube of moderate length.

Shell thin, inflated, subquadrate, inequilateral, inequivalve, gaping behind; the right valve a little larger than the other; color pearly

white with a pale olive periostracum and a minutely granular surface, the granules being disposed in radial lines with wider interspaces; beaks small, acute, very anterior, prosocœlous, with a minute lunular depression in front of them; a wide shallow depression with an obscure ridge above it extends backward dorsally to the posterior margin, with a lanceolate area between the ridges of the two valves; base almost parallel with the dorsal hinge line; margins of the valves simple, sharp, slightly tortuous; interior pearly; hinge with a small internal resilium on an inconspicuous nymph, with a very small oval lithodesma. Height 16.5; length 25; length of anterior end 4; diameter, 16 mm.

In deep water off Mazatlan, Mexico, Cat. No. 266802, U.S.N.M. This is the largest of the genus yet described.

POROMYA (DERMATOMYA) TENUICONCHA, new species.

Shell small, thin, olivaceous, the pearly luster showing through the periostracum; equivalve, inequilateral, anterior end shorter, rounded in front; posterior end longer, roundly truncate; beaks prominent, prosocœlous, with a marked but uncircumscribed depression in the lunular region in front of them; interior pearly, brilliant; margins simple, sharp; hinge in the left valve with a small internal resilium seated on an inconspicuous oblique chondrophore, with a notch immediately in front of it, into which fits a projecting denticle on the corresponding part of the opposite valve. Height, 13; length of shell, 16; of anterior portion, 6; diameter, 10 mm.

In deep water off Monterey Bay, California. Cat. No. 266865, U.S.N.M.

This recalls *P. (D.) equatorialis* Dall, but is more delicate, less inflated and smaller.

ERYCINA COLPOICA, new species.

Shell small, white, equivalve, very inequilateral, the anterior end much the longer and somewhat expanded, posterior shorter and smaller, both rounded; the dorsal and basal margins slightly arcuate, subparallel; surface sculptured only with concentric incremental lines, covered with a thin, pale yellowish periostracum; beaks low, inconspicuous, valves rather compressed; interior polished, hinge formula $\frac{10.01.010}{01.10.101}$; chondrophore very narrow, oblique, and posteriorly directed. Length of shell, 10; of anterior part, 8; height, 6; diameter, 3.5 mm.

Beach at the head of the Gulf of California. Dr. E. Palmer, Cat. No. 267408, U.S.N.M.

ROCHEFORTIA COMPRESSA, new species.

Shell small, thin, glassy, compressed, subovate, inequilateral; beaks low, pointed, inconspicuous; surface very finely, sharply, evenly, concentrically striated; anterior end longer, evenly rounded; poste-

rior more pointed; interior polished, the muscular scars perceptible, small; hinge small and weak, constructed of two feeble laterals in each valve and a median internal resilium. Length of shell, 7; of anterior part, 4; height, 6; diameter, 2 mm.

With the last. Cat. No. 214445, U.S.N.M.

ALIGENA NUCEA, new species.

Shell small, white, rather solid, ovate, slightly inequilateral, moderately inflated; surface rather rude, with irregular, rather coarse incremental lines; beaks full, somewhat posterior, the anterior end of the shell shorter; interior porcellanous, the muscular scars unusually large, the pallial line irregular, entire; hinge with a long, strong, narrow, chondrophore, a small pustular projection in front of it, as usual in the genus. Length of shell, 4.0; of anterior portion, 1.75; height, 3.0; diameter, 2.2 mm.

Gulf of California. Cat. No. 267149, U.S.N.M.

This species recalls *A. cokeri* Dall, of Peru, but wants the median radial depression and has a proportionately stronger hinge.

VESICOMYA (ARCHIVESICA?) SUAVIS, new species.

Shell oval, white, with an elegantly polished, minutely concentrically sparsely lamellose periostracum, smoother near the beaks; equi-valve, inequilateral, the beaks nearer the anterior end; there is no lunule, but a long lanceolate depression radiating from the beaks, bordered on each side by an obscure radial rib, simulates an escutcheon though not defined by any incised line; shell moderately inflated, the beaks full but low and prosocoelous; the ligament external, strong, and conspicuous; the two ends of the shell subequal and rounded, the anterior end a little smaller; interior chalky, with large adductor scars and an entire pallial line; hinge like that of *V. gigas* but less developed; length of the shell, 34; of the anterior part, 10; height, 22; diameter, 13 mm.

West of Tiburon Island, Gulf of California, in deep water. Cat. No. 266881, U.S.N.M.

This species, by the shell, belongs to the group of *V. lepta* and *gigas*, but the soft parts being unknown its place must remain uncertain.

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